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(54) Title: ((CYCLO)ALKYL SUBSTITUTED)-.GAMMA.-AMINOBUTYRIC ACID DERIVATIVES (=GABA ANALOGUES), THEIR PREPARATION AND THEIR USE IN THE TREATMENT OF NEUROLOGICAL DISORDERS

$$H_2N$$
 $(CH_2)_n$ 
 $(1A)$ 
 $(CH_2)_n$ 
 $(1B)$ 
 $(CH_2)_n$ 

$$-(CH_2)_{0-6}$$
 (B)

(57) Abstract

Novel amines of formulas (1A) and (1B) or a pharmaceutically acceptable salt thereof wherein: n is an integer of from 0 to 2; R is sulfonamide, amide, phosphonic acid, heterocycle, sulfonic acid, or hydroxamic acid; A is hydrogen or methyl; and B is (a), straight or branched alkyl of from 1 to 11 carbons, or -(CH<sub>2</sub>)<sub>1.4</sub>-Y-(CH<sub>2</sub>)<sub>0.4</sub>-phenyl wherein Y is -O-, -S-, -NR'<sub>3</sub> wherein R'<sub>3</sub> is alkyl of from 1 to 6 carbons, cycloalkyl of from 3 to 8 carbons, benzyl or phenyl wherein benzyl or phenyl can be unsubstituted or substituted with from 1 to 3 substituents each independently selected from alkyl, alkoxy, halogen, hydroxy, carboxy, carboalkoxy, trifluoromethyl, and nitro are disclosed and are useful as agents in the treatment of epilepsy, faintness attacks, hypokinesia, cranial disorders, neurodegenerative disorders, depression, anxiety, panic, pain, neuropathological disorders, inflammatory diseases, and gastrointestinal disorders, especially IBS. Processes for the preparation and intermediates useful in the preparation are also disclosed.

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A. CLASSIFICATION OF SUBJECT MATTER IPC 6 C07D257/04 A61k C07D271/06 C07F9/38 A61K31/66 A61K31/41 C07D291/04 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 6 C07D Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category \* US 2 465 803 A (HEATH R.L. & PIGGOTT H.A.) 1 χ 29 March 1949 see reduction products of examples 4,5,7-9,11,12 US 2 866 786 A (FEICHTINGER H. & TUMMES 1 χ H.) 30 December 1958 see column 3, line 50 - line 52 RIEMSCHNEIDER R. & KAMPFER H.: "Zur 1 X Kenntnis der cis-trans-Asymmetrie. XI. Optische Aktivität von cis,trans-1,3-Bis-[.alpha.-phenylcinnamoyl amino]-2-methyl-2-n-propyl-propan" JUSTUS LIEBIEGS ANNALEN DER CHEMIE. vol. 665, 1963, pages 35-42, XP002098848 see formula VIII see page 37 -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. X Special categories of cited documents : "T" later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not cited to understand the principle or theory underlying the considered to be of particular relevance invention \*E\* earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docucitation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled other means in the art. document published prior to the international filing date but "&" document member of the same patent family later than the prionty date claimed Date of mailing of the international search report Date of the actual completion of the international search 23.09.99 1 April 1999 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Hartrampf, G Fax: (+31-70) 340-3016

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| Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)  |
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| This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:   |
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| Dependent claim 2 defines an integer m, which appears neither in formula 1A nor in formula 1B.   |
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